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09/989,231	11/21/2001	Robert Hofner	Q66405	9606

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EXAMINER
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PUENTE, EMERSON C

ART UNIT	PAPER NUMBER
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2113

DATE MAILED: 08/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/989,231	<b>Applicant(s)</b> HOFNER, ROBERT	
	<b>Examiner</b> Emerson C Puente	<b>Art Unit</b> 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ✓   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20030131, 20021121</u> . ✓ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This action is made Non-Final. Claims 1-72 have been examined.

#### ***Claim Objections***

Claims 62 and 68-72 are objected to because of the following informalities:

Two consecutive claims have been numbered 62 in the application. Please renumber claims appropriately. For examination purposes, the first and second occurrence of claim 62 will be referred to as "62a" and "62b", respectively.

In regard to claim 62b, claim 62b recites a computer system of claim 61, but claim 61 refers to a method. Please change such that claim 62b depends on 62a. For examination purposes, claim 62b is dependent on claim 62a.

In regard to claims 68-72, claims 68-72 recite a computer system of claim 67, but claim 67 refers to a computer program product. Please change such that the preamble of claims 68-72 states "The computer software program product of ...".

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-4, 9-13, 15-19, 26-28, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,609,213 of Nguyen et al. referred hereinafter "Nguyen".

In regards to claim 1, Nguyen discloses:

a first network node and a second network node connected via a communication link (see figure 1 and column 4 lines 20-40);

at least one process capable of execution on said first network node (see column 3 lines 25-40 and column 6 lines 25-35)

a first monitor for said process, said first monitor capable of execution on said second network node, said monitor capable of detecting failure of said process on said first network node and causing said process to execute on said second network node (see column 3 lines 30-40).

In regards to claim 2, Nguyen discloses:

wherein said first and second network nodes are central processing units (see column 1 lines 30-35).

In regards to claim 3, Nguyen discloses:

wherein said first and second network nodes are computer hosts (see column 3 lines 24-30).

In regards to claim 4, Nguyen discloses:

wherein said first and second network nodes are computer servers (see column 3 lines 24-30).

In regards to claim 9, Nguyen discloses:

wherein said communication link is a local area network (see column 4 lines 20-25).

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In regards to claim 10, Nguyen discloses:

wherein said communication link is a wide area network (see column 4 lines 20-25)

In regards to claim 11, Nguyen discloses:

wherein said first monitor periodically checks said process executing on said first network node in order to detect a failure of said process (see column 5 lines 15-20).

In regards to claim 12, Nguyen discloses:

wherein said periodic checking comprises sending a key to said process and receiving a predefined response from said process (see column 5 lines 28-31).

In regards to claim 13, Nguyen discloses:

wherein said periodic checking comprises monitoring heartbeat signals sent at a periodic rate from said process (see column 5 lines 15-20).

In regards to claim 15, Nguyen discloses:

wherein said process is selected from the group consisting of a service, a task and a thread (see column 6 lines 25-35).

In regards to claim 16, Nguyen discloses:

a first plurality of network nodes connected via a first communication link (see figure 1 and column 4 lines 20-40);

a second plurality of network nodes connected via a second communication link (see figure 1 and column 4 lines 20-40);

said first communication link and said second communication link connected through a third communication link (see figure 1 and column 4 lines 40-45).

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a process capable of execution on one of the network nodes (see column 3 lines 35-40 and column 6 lines 25-35);

a monitor for said process capable of execution on one of the network nodes, said monitor capable of detecting failure of said process and causing said process to execute on another of the network nodes (see column 3 lines 30-40).

In regards to claim 17, Nguyen discloses:

wherein said network nodes are central processing units (see column 1 lines 30-35).

In regards to claim 18, Nguyen discloses:

wherein said network nodes are computer hosts (see column 3 lines 24-30).

In regards to claim 19, Nguyen discloses:

wherein said network nodes are computer servers (see column 3 lines 24-30).

In regards to claim 26, Nguyen discloses:

wherein said first monitor periodically checks said process executing on said one node of said first plurality of network nodes in order to detect a failure of said process (see column 5 lines 15-20) .

In regards to claim 27, Nguyen discloses:

wherein said periodic checking comprises sending a key to said process and receiving a predefined response from said process (see column 5 lines 28-31).

In regards to claim 28, Nguyen discloses:

wherein said periodic checking comprises monitoring heartbeat signals sent at a periodic rate from said process (see column 5 lines 15-20).

In regards to claim 34, Nguyen discloses:

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wherein said process is selected from the group consists of a service, a task and a thread  
(see column 6 lines 25-35).

Claims 48-52 and 54-72 are rejected under 35 U.S.C. 102(b) as being anticipated by US  
Patent No. 6,701,449 of Davis et al. referred hereinafter "Davis".

In regards to claim 48, Davis discloses:

monitoring the operation of said network node by at least two managers (see figure 7 and  
column 4 lines 25-33);

exchanging heartbeats between said two managers (see figure 7 and column 4 lines 25-  
33);

if said first manager does not receive a heartbeat from said second manager, then said  
first manager executes diagnostic tests to determine how to correct the failed receipt of the  
heartbeat from said second manager (see column 8 lines 23-38).

In regards to claim 49, Davis discloses:

wherein said network node is a central processing unit (see figure 2 item 218).

In regards to claim 50, Davis discloses:

wherein said network node is a computer host (see column 1 lines 15-25).

In regards to claim 51, Davis discloses:

wherein said network node is a computer server (see column 1 lines 15-25).

In regards to claim 52, Davis discloses:

wherein said network node is a storage node (see column 1 lines 15-25).

In regards to claim 54, Davis discloses:

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wherein said network node is a file system (see column 1 lines 15-25).

In regards to claim 55, Davis discloses:

wherein said network node is a location independent file system (see column 1 lines 15-25).

In regards to claim 56, Davis discloses:

attempting to access said second manager by said first manager; attempting to access the operating system of said second manager by said first manager; attempting to access a first network interface device of said second manager by said first manager; and attempting to access a first switch of said second manager by said first manager. Davis discloses a channel comprise local and remote system software (OS and manager), NIC (network interface device), and network switch. He further states that one of these components can cause the fault and that the fault analysis routine obtains information to determine the cause of the fault and derive a solution to the problem (see column 8 lines 23-38). There must be an attempt to access local and remote system software (OS and manager), NIC (network interface device), and network switch to determine the cause of the fault and derive a solution to the problem.

In regards to claim 57, Davis discloses:

wherein, if access attempt of said first network device by said first manager is unsuccessful, said first manager attempts to access said second manager through a second network interface device (see column 6 lines 1-6 and column 8 lines 23-37).

In regards to claim 58, Davis discloses:

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wherein, if access attempt of said first switch by said first manager is unsuccessful, said first manager attempts to access said second manager through a second switch (see column 6 lines 1-6 and column 8 lines 23-37).

In regards to claim 59, Davis discloses:

wherein determination of failure is selected from the group consisting of said second manager, a network interface device, and a switch (see column 8 lines 25-40).

In regards to claim 60, Davis discloses:

wherein, upon determination of a failure of said first network interface device, a redundant network interface device replaces said first network interface device. Davis discloses closing a socket and opening another socket (see figure 3 and column 8 lines 1-5). If another socket is accessed, then another NIC card is used, indicating a redundant network interface device replaces said first network interface device.

In regards to claim 61, Davis discloses:

wherein, upon determination of a failure of said first switch, a redundant switch replaces said first switch. Davis discloses closing a socket and opening another socket (see figure 3 and column 8 lines 1-5). If another socket is accessed, then another channel is being used. Since each channel has a switch (see column 8 lines 30-35), a separate switch is used, indicating a redundant switch replaces said first switch.

In regards to claim 62a, Davis discloses:

a plurality of network nodes interconnected by a communication link (see figure 1 item 108,110);

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a memory (see figure 2 item 220) comprising software instructions adapted to enable the computer system to perform:

monitoring the operation of a node in the plurality of network nodes by at least two managers (see figure 7 and column 4 lines 25-33);

exchanging heartbeats between said two managers (see figure 7 and column 4 lines 25-33);

if said first manager does not receive a heartbeat from said second manager, then said first manager executes diagnostic tests to determine how to correct the failed receipt of the heartbeat from said second manager (see column 8 lines 23-28).

In regards to claim 62b, Davis discloses:

attempt to access said second manager by said first manager; attempt to access the operating system of said second manager by said first manager; attempt to access a first network interface device of said second manager by said first manager; and attempt to access a first switch of said second manager by said first manager. Davis discloses a channel comprise local and remote system software (OS and manager), NIC (network interface device), and network switch. He further states that one of these components can cause the fault and that the fault analysis routine obtains information to determine the cause of the fault and derive a solution to the problem (see column 8 lines 23-38). There must be an attempt to access local and remote system software (OS and manager), NIC (network interface device), and network switch to determine the cause of the fault and derive a solution to the problem.

In regards to claim 63, Davis discloses:

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if access attempt of said first network device by said first manager is unsuccessful, said first manager attempts to access said second manager through a second network interface device (see column 6 lines 1-6 and column 8 lines 23-37).

In regards to claim 64, Davis discloses:

if access attempt of said first switch by said first manager is unsuccessful, said first manager attempts to access said second manager through a second switch (see column 6 lines 1-6 and column 8 lines 23-37).

In regards to claim 65, Davis discloses:

upon determination of a failure of said first network interface device, a redundant network interface device replaces said first network interface device. Davis discloses closing a socket and opening another socket (see figure 3 and column 8 lines 1-5). If another socket is accessed, then another NIC card is used, indicating a redundant network interface device replaces said first network interface device.

In regards to claim 66, Davis discloses:

upon determination of a failure of said first switch, a redundant switch replaces said first switch. If another socket is accessed, then another channel is being used. Since each channel has a switch (see column 8 lines 30-35), a separate switch is used, indicating a redundant switch replaces said first switch.

In regards to claims 67-72, see basis for rejection for claims 48, 56-59, and 60-61.

Claims 67-72 is simply a computer software product comprising software instructions for enabling the network node to perform predetermined operations and a computer readable

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medium bearing the software instructions for implementing the method set forth in claims 48, 56-59, and 60-61 and therefore is necessarily included in the teachings of Davis.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 7, 8, 20, 22, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Davis.

In regards to claim 5 and 20, Nguyen discloses all the claimed subject matter, except:  
wherein said first and second network nodes are storage nodes

However, Davis discloses the need for fault tolerance for network appliances, which includes general purpose computers that execute specific network task, such as data storage services (see column 1 lines 15-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Nguyen and Davis. A person of ordinary skill in the art time of the invention would have been motivated because Davis discloses the need for fault tolerance (see column 1 lines 15-25) and incorporate the teachings of Nguyen would provide fault tolerance for network appliances.

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In regards to claim 7, 8, 22, and 23, Nguyen discloses all the claimed subject matter, except:

wherein said first and second network nodes are location independent file systems.

However, Davis discloses the need for fault tolerance for network appliances, which include general purpose computers that execute specific network task, such as file server services (see column 1 lines 15-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Nguyen and Davis. A person of ordinary skill in the art time of the invention would have been motivated because Davis discloses the need for fault tolerance (see column 1 lines 15-25) and incorporate the teachings of Nguyen would provide fault tolerance for network appliances.

Claims 6 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of US Patent No. 6,519,053 of Motamed et al. referred hereinafter "Motamed".

In regards to claim 6 and 21, Nguyen discloses all the claimed subject matter, except: wherein said first and second network nodes are printer nodes.

Motamed discloses printer server computers, indicating printer nodes (see abstract)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Nguyen and Motamed. A person of ordinary skill in the art time of the invention would have been motivated to incorporate the teachings of Nguyen to printer server computers because Nguyen discloses servers (see column 4 lines 20-25 and printer server computers, as per teaching of Motamed, which indicate printer nodes, constitute as servers.

Claims 24 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of US Patent No. 6,324,161 of Kirch.

In regards to claim 24 and 25, Nguyen fails to explicitly disclose:

wherein said first communication link and said second communication link are local area networks

wherein said third communication link is a wide area network.

However, Nguyen discloses the server network can include a LAN, a WAN, or other computer network allowing transmission of data between computing device.

Kirch discloses a WAN configuration wherein a first plurality of nodes are connected via LAN, a second plurality of nodes connected via LAN and the two LANs connected via a WAN (see figure 3a item 20 and column 12 lines 50-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein said first communication link and said second communication link are local area networks, and said third communication link is a wide area network. A person of ordinary skill in the art would have been motivated because Nguyen discloses the server network can include a LAN, a WAN, or other computer network allowing transmission of data between computing device and a first plurality of nodes are connected via LAN, a second plurality of nodes connected via LAN and the two LANs connected via a WAN, as per teaching of Kirch, constitutes a known type of WAN configuration

Claims 14 and 29-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of US Patent No. 6,564,336 of Majkowski

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In regards to claim 14, Nguyen discloses:

terminating said process from execution on said first network node (see column 6 lines 25-35 and 60-65);

initiating said process on said second network node (see column 6 lines 25-35);

and terminating said first monitor from execution on said second network node. Nguyen discloses taking the failing server offline (see column 6 lines 60-65). The failing server would not be monitored since it is offline, thus indicating terminating said first monitor from execution.

However, Nguyen fails to disclose:

initiating a second monitor on said first network node;

Majkowski discloses wherein upon recovery of the failed server after the secondary server becomes primary, the failed server becomes the new secondary server (see column 5 lines 9-10). If the failed server disclosed in Nguyen becomes the backup or secondary server, as per teaching of Majkowski, then it would initiate a monitor on the primary server, thus indicating initiating a second monitor on said first network node.

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the failed server becomes the backup or secondary server after recovery, thus indicating initiating a second monitor on said first network node. A person of ordinary skill in the art would have been motivated because Nguyen discloses fault tolerance and backup server service (see column 3 lines 20-25), and initializing the failed server to become the backup server after recovery, thus enabling monitoring of the new primary server by the recovered server, as per teaching of Majkowski, would provide fault tolerance and backup server service for the new primary server.

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In regards to claim 29, Nguyen discloses terminating said process from execution (see column 6 lines 25-35 and 60-65); transferring and initiating said process on another network node (see column 6 lines 25-35);

terminating said first monitor from execution. Nguyen discloses taking the failing server offline (see column 6 lines 60-65). The failing server would not be monitored since it is offline, thus indicating terminating said first monitor from execution.

However, Nguyen fails to explicitly disclose:

initiating a second monitor on the network node that is not the same node as the node to which the process was transferred; and

Majkowski discloses wherein upon recovery of the failed server after the secondary server becomes primary, the failed server becomes the new secondary server (see column 5 lines 9-10). If the failed server disclosed in Nguyen becomes the backup or secondary server, as per teaching of Majkowski, then it would initiate a monitor on the primary server, thus indicating initiating a second monitor on the network node that is not the same node as the node to which the process was transferred.

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the failed server becomes the backup or secondary server after recovery, thus indicating initiating a second monitor on the network node that is not the same node as the node to which the process was transferred. A person of ordinary skill in the art would have been motivated because Nguyen discloses fault tolerance and backup server service (see column 3 lines 20-25), and initializing the failed server to become the backup server after recovery, thus

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enabling monitoring of the new primary server by the recovered server, as per teaching of Majkowski, would provide fault tolerance and backup server service for the new primary server.

In regards to claim 30, Nguyen discloses:

wherein, if said process initially executed on a network node connected to said first communication link, then process execution is initiated on a network node connected to said second communication link (see column 6 lines 25-35).

In regards to claim 31, Nguyen discloses:

wherein, if said process initially executed on a network node connected to said second communication link, then process execution is initiated on a network node connected to said first communication link (see column 6 lines 25-35).

In regards to claim 32, Nguyen discloses:

wherein, if said first monitor initially executed on a network node connected to said first communication link, then execution of said second monitor is initiated on a node connected to said second communication link (see column 6 lines 25-35).

In regards to claim 33, Nguyen in view of Majkowski, discloses:

wherein, if said first monitor initially executed on a network node connected to said second communication link, then execution of said second monitor is initiated on a network node connected to said first communication link. Majkowski discloses wherein the failed server becomes the backup or secondary server after recovery (see column 5 lines 9-10) and Nguyen discloses the failed server is connected to the first network link (see figure 1 and column 4 lines 20-40). Thus, the second monitor would be on the failed server after it is recovered, which is on a network node connected to said first communication link

Claims 35-38 and 43-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Majkowski and US Patent No. 6,754,855 of Denninghoff et al. referred hereinafter "Denninghoff".

In regards to claim 35 and 46, Nguyen discloses:

a first network node and a second network node (see figure 1 and column 4 lines 20-40);

a memory comprising software instructions adapted to enable the computer system to perform:

executing a process on the first network node(see column 3 lines 25-40 and 25-35);

executing a first monitor on a second network node (see column 3 lines 30-40),

said second network node connected to said first network node via a communications link; periodically checking the operation of said process by said first monitor (see column 3 lines 30-40);

if an execution failure of said process is detected, then terminating execution of said process on said first network node(see column 6 lines 25-35 and 60-65);

transferring and initiating execution of said process on said second network node (see column 6 lines 25-35);

terminating said first monitor (see column 6 lines 60-65).

However Nguyen fails to disclose:

initiating execution of a second monitor for said process on said first network node and

wherein fail over does not require the termination of all the processes executing on the first network node.

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Majkowski discloses wherein upon recovery of the failed server after the secondary server becomes primary, the failed server becomes the new secondary server (see column 5 lines 9-10). If the failed server disclosed in Nguyen becomes the backup or secondary server, as per teaching of Majkowski, then it would initiate a monitor on the primary server, thus indicating initiating execution of a second monitor for said process on said first network node.

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the failed server becomes the backup or secondary server after recovery, thus indicating initiating execution of a second monitor for said process on said first network node. A person of ordinary skill in the art would have been motivated because Nguyen discloses fault tolerance and backup server service (see column 3 lines 20-25), and initializing the failed server to become the backup server after recovery, thus enabling monitoring of the new primary server by the recovered server, as per teaching of Majkowski, would provide fault tolerance and backup server service for the new primary server.

Furthermore, Denninghoff discloses enabling recovery from failure without rebooting (see column 12 lines 55-60). If the node remains in place or doesn't reboot during recovery of the node, then there is still processes executing on the node. Hence, fail over does not require the termination of all the processes executing on the first network node.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings such that fail over does not require the termination of all the processes executing on the first network node. A person of ordinary skill in the art would have been motivated because Nguyen discloses recovery from failure (see column 6 lines 60-65), and

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enabling recovery without having to taking the system offline or rebooting eliminates user intervention and disruption of user services (see column 2 lines 25-30).

In regards to claim 36, Nguyen discloses:

wherein said first and second network nodes are a central processing units (see column 1 lines 30-35).

In regards to claim 37, Nguyen discloses:

wherein said first and second network nodes are computer hosts (see column 3 lines 24-30).

In regards to claim 38, Nguyen discloses:

wherein said first and second network nodes are computer servers (see column 3 lines 24-30).

In regards to claim 43, Nguyen discloses:

wherein said communication link is a LAN (see column 4 lines 20-25).

In regards to claim 44, Nguyen discloses:

wherein said communication link is a WAN (see column 4 lines 20-25).

In regards to claim 45, Nguyen discloses:

wherein said process is selected from the group consisting of a service, a task and a thread (see column 6 lines 25-35)

In regards to claim 47, see basis for rejection for claim 35. Claim 35 is simply a computer software product comprising software instructions for enabling the computer system to perform predetermined operations and a computer readable medium bearing the software

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instructions for implementing the method set forth in claims 35 and therefore is necessarily included in the teachings of Nguyen in view of Majkowski and Denninghoff

Claims 39, 41, and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Majkowski and Denninghoff, and in further view of Davis.

In regards to claim 39, Nguyen discloses all the claimed subject matter, except:  
wherein said first and second network nodes are storage nodes

However, Davis discloses the need for fault tolerance for network appliances, which includes general-purpose computers that execute specific network task, such as data storage services (see column 1 lines 15-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Nguyen and Davis. A person of ordinary skill in the art time of the invention would have been motivated because Davis discloses the need for fault tolerance (see column 1 lines 15-25) and incorporate the teachings of Nguyen would provide fault tolerance for network appliances.

In regards to claim 41 and 42, Nguyen discloses all the claimed subject matter, except:  
wherein said first and second network nodes are location independent file systems.

However, Davis discloses the need for fault tolerance for network appliances, which includes general purpose computers that execute specific network task, such as file server services (see column 1 lines 15-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings. A person of ordinary skill in the art time of the invention

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would have been motivated because Davis discloses the need for fault tolerance (see column 1 lines 15-25) and incorporate the teachings of Nguyen would provide fault tolerance for network appliances.

Claim 40 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in view of Majkowski and Denninghoff and in further view of Motamed.

In regards to claim 40, Nguyen in view of Majkowski and Denninghoff discloses all the claimed subject matter, except:

wherein said first and second network nodes are printer nodes.

Motamed discloses printer servers, indicating printer nodes (see abstract)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings. A person of ordinary skill in the art time of the invention would have been motivated because Davis discloses servers (see column 4 lines 20-25 and printer server systems, indicating printer nodes, constitute as servers.

Claim 53 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Motamed.

In regards to claim 53, Davis discloses all the claimed subject matter, except:

wherein said first and second network nodes are printer nodes.

Motamed discloses printer servers systems, indicating printer nodes (see abstract)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Davis and Motamed. A person of ordinary skill in the art time of the invention would have been motivated incorporate the teachings of Davis to printer

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server computers because Davis discloses network appliances, which are general purpose computers that perform specific network task (see 1 lines 15-20) and printer server systems, as per teaching of Motamed, which indicate printer nodes, constitute general purpose computers that perform specific network task

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C Puente whose telephone number is (703) 305-8012. The examiner will be moving in October 2004. The examiner number at the new site is (571) 272-3652. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5631.

***Emerson Puente***  
**8/26/04**

  
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